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Dated 3 September 2010



1/77

# Request for grant of a patent

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The Patent Office

Cardiff Road  
Newport  
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NP10 8QQ

1. Your reference KH/Una Tucker 31DEC03 E862609-1 010019  
P01/7700 0.00-0330185.0 NONE

2. Patent application number  
(The Patent Office will fill this part in)

0330185.0

30 DEC 2003

3. Full name, address and postcode of the or of each applicant (underline all surnames)

Kneads Must Limited  
23 Lloyd Villas, Lewisham Way  
Brackley  
London SE4 1US

Patents ADP number (if you know it)

8780694001

If the applicant is a corporate body, give the country/state of its incorporation

IA

4. Title of the invention Massaging Device

5. Name of your agent (if you have one)

Hammonds

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

7 Devonshire Square  
Cutlers Gardens  
London  
EC2M 4YH

Patents ADP number (if you know it)

8621328001

IA

6. Priority: Complete this section if you are declaring priority from one or more earlier patent applications, filed in the last 12 months.	Country	Priority application number (if you know it)	Date of filing (day / month / year)

7. Divisionals, etc: Complete this section only if this application is a divisional application or resulted from an entitlement dispute (see note f)	Number of earlier UK application	Date of filing (day / month / year)

8. Is a Patents Form 7/77 (Statement of inventorship and of right to grant of a patent) required in support of this request? YES

Answer YES if:

- a) any applicant named in part 3 is not an inventor, or
- b) there is an inventor who is not named as an applicant, or
- c) any named applicant is a corporate body.

Otherwise answer NO (See note d)

## Patents Form 1/77

9. Accompanying documents: A patent application must include a description of the invention. Not counting duplicates, please enter the number of pages of each item accompanying this form:

Continuation sheets of this form 0

Description 8 —

Claim(s) 1 —

Abstract 1 —

Drawing(s) 3 x 3

10. If you are also filing any of the following, state how many against each item.

Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (Patents Form 7/77)

Request for a preliminary examination and search (Patents Form 9/77)

Request for substantive examination (Patents Form 10/77)

Any other documents (please specify)

11. ☒ We request the grant of patent on the basis of this application.

Signature(s)

*Hammonds*

Date 30 December 2003

12. Name, daytime telephone number and e-mail address, if any, of person to contact in the United Kingdom
- Kathleen D Harris  
Tel: 0870 839 1374

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### Notes

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## MASSAGING DEVICE

### FIELD OF APPLICATION

The present invention relates to a hand-held massaging device for use in three standard  
5 Swedish massage applications: effleurage (stroking), petrissage (kneading) and frictions, in addition to various deep tissue and lymph drainage massage movements.

### BACKGROUND

10 The present invention relates to a massage device that is hand-held and requires no mechanical or electrical moving parts in order to fulfil its function. In particular, the massage device is useful for so-called "Swedish" or "Aromatherapy" massages. Swedish and Aromatherapy massage consists of four basic types of movement: effleurage, petrissage, frictions and tapotment.

15 Effleurage consists of long, soothing, stroking movements that are performed using the whole underside of one or two flat hand(s), pressed gently but firmly onto the skin of the recipient. Slightly more pressure is applied when you take the stroke in the direction of the heart (centripetally) to improve circulation and lymph flow. A fairly slow and continuous movement is essential. It is important to keep the flat hand gently pressed  
20 onto the skin, moulding onto the contours of the area being massaged, in order to attain an even pressure at all times. Effleurage is always used at the start of a massage, to soothe and help the client get used to the therapist's touch. It is also employed at the end of a session to give a relaxing finish to the massage. Effleurage is also used as a connector stroke – to be used prior to and in between more stimulating strokes.

25 Petrissage movements involve various ways of kneading, rolling and picking up the skin and muscles. These movements help in strengthening the muscle structures by stimulating the deep layers of tissue and also help in increasing the supply of blood to the area. Kneading motions are employed to work muscle against muscle or muscle  
30 against bone or both, thus breaking down tension build-up within the muscles. At the same time, they also improve the flow of lymph (which basically consist of the blood's waste products). Petrissage is a firmer movement and usually follows effleurage. Light kneading eases the top muscle layers and is usually used for the elderly, the infirm or the very young, while firmer kneading works on the deeper muscles and is usually  
35 employed for most healthy adults.

Frictions, also known as connective tissue movements, use the thumb, fingertips or knuckles, to apply deep direct pressure to one particular site of muscular tension. It is very useful for focusing on specific areas of tightness and muscle spasms in the back and neck and can be employed in a number of ways. Static pressure is applied by leaning gradually into the muscle, slowly deepening the pressure without any rotating action. The user presses down on the affected muscles for a few seconds and then gradually releases the pressure. Alternatively, one can also apply small "sawing motions" with stiffened forefingers or tight circular motions using the thumbs. Another form of friction uses the knuckles, knuckling in a loosely clenched motion, to release tension up the sides of the spine, neck and in other areas. One never applies any sort of friction directly to a bony area as the movement is too deep and will likely result in discomfort.

Deep tissue massage is used to release chronic patterns of muscular tension using slow strokes, direct pressure, or friction. Often the movements are directed across the grain of the muscles (cross-fibre) using the fingers, thumbs, or elbows. This is applied with greater pressure and at deeper layers of the muscle than Swedish massage and that is why it is called deep tissue. It is also more specific, focusing on a specific problem area and then working in all the layers of muscles that might be involved. Deep tissue massage lends itself to being more focused on a problem area and requires a greater application of controlled force.

### BRIEF DESCRIPTION OF THE FIGURES

In the Figures:

FIGURE 1 is a depiction of the hand held massage device with finger rings (2) and an upper gently -arched dome (1) with tapered sides or edges (3) with a gently concaved bottom-most portion of the massage device (4).

FIGURE 2 illustrates the device with an added hand grip (5).

FIGURE 3 (Overview) illustrates a top view of the dome (1) and demonstrates the near oval shape of the upper portion of the device with the widest portion suitable for effleurage and general petrissage.

FIGURE 3 (Side view) illustrates a side view of the device.

## OBJECTS AND STATEMENT OF THE INVENTION

The object of the present invention is to supply an all-round, self-contained device that is easy to use by the user and provides the recipient with a beneficial massage using the three Swedish massage applications. The device of the present invention is light in weight, possesses no moving or attachment parts, and is completely self-contained and easy to use. The device may be used over clothes or can be applied directly on skin after the application of suitable lubricants.

Various massage implements currently available almost invariably concentrate on only one type of massage movement. This will not necessarily be as beneficial to the recipient and if a tool is used for a massage application that it was not designed, this could potentially result in the recipient experiencing discomfort or injury. Likewise, the user could also experience discomfort or injury by inappropriately using tools for the task at hand. For example, United States Patent No. 6,241,696 (the **"696 patent"**) relates to a hand-held implement having a number of omni-directional balls which can be used to provide an effleurage type movement. The limitation of this device is that it cannot carry out fully effective effleurage as, unlike the traditional hand position in this movement, it is not flat. Effleurage is always performed with the palm(s) pressed flatly against the contours of the area being massaged. This is to increase blood flow to the heart and move the lymph around a body to their corresponding lymph node(s). The omni-directional balls are bulbous in nature and therefore their spatial effectiveness is limited to the point of where the top point of each orb meets the skin and further results in several spaces of non-contact being created between each consecutive balls as they lie next to each other. The spatial limitation of the orb also limits petrissage application, should it be attempted, in that it creates a soft point which could prove painful if applied to forcefully to one point for any period of time. The bulbous nature of the 696 patent makes it awkward in small spaces (i.e. nape of neck, feet) etc and eliminates the employment of frictions as it cannot be applied to a small, static area. Furthermore, frictions cannot be employed with this patent as the balls move too freely and the intensity of proper friction cannot be maintained. In addition, it cannot be used with oils or creams as residue would build-up in the sockets, thus impairing the balls' omni-directional movement.

Patent WO92/21310 (the **"310 patent"**) relates to a hand-held device comprising bulbous projections joined together by a connecting frame that can be used for deep pressure, petrissage type movements. Effleurage cannot be properly employed with this

device. Its bulbs are not omni-directional and, by way of the frame connecting them, placed too far apart thus making any sort of gliding movements uneven and possibly painful to the recipient. If too much pressure is applied during an attempt at effleurage, the bulbs (due to the spatial limitation of orb point to skin) will press uncomfortably into the muscles and the connecting frame will create an edge that will scratch the skin. When fully assembled, it creates a square frame with bulbous projections at each corner. The user is then encouraged to insert the forefinger and middle finger into the hollowed centre of the square in order to manipulate the device for massage movement. If, upon insertion of the fingers, the palm is left in the prone position, the fingers would impede any sort of movement, therefore, the palm must be upturned (in the supine position), the second digits of the fingers pressed against the lower part of the frame with the edge of the palm resting on the upper part of the frame, which creates stiff, limited hand/wrist movement. The positioning allows a petrissage type movement limited to the area covered by the two connected orbs and their corresponding piece of frame. For the reasons above (limited spatial movement of the orbs and the abrasive edge that the connecting creates) only a very basic and light petrissage can be carried out and although the 310 patent applies itself better to smaller spaces, it cannot work larger areas. It can, however, in its disassembled, single orb formation, carry out effective friction movements. There is, however, no adequate support for the user's wrist, and only a very limited rotation/ up and down movement can be employed with limited pressure. This device therefore cannot be used for a thorough massage and may create wrist/finger joint problems for the user over the long-term. Finally, because this device is not self-contained and can be disassembled for one/two or four orb use, the user can not place much pressure or movement on the 310 patent, for fear that the device could disassemble mid-movement causing pain and potentially injury to either the user, the recipient or both.

United States Patent US 6,241,694 (the "'694 patent") relates to a hand-held device with projections and flat members to accommodate both effleurage, petrissage and friction type movements. This is a self-contained device that can be used with or without oils. It is triangular in shape with a triangular void in which the user inserts their hand in order to grip the device for its various uses. It has a straight edge with which to carry out effleurage. Whilst theoretically the straight side has the spatial length needed to carry out effleurage, the limited width of the edge (the width of a finger) and its, rectangular features creates too much of an edge which, when pressed into a flat area of the body (i.e. back) with any force will create a scraping effect that could cause

discomfort and/or pain to the recipient. The same applies for the second, arched edge which is presumably for application of effleurage to rounder body parts such as arms and shoulders. The '694 patent also has three projecting leg members at each point of the triangle and an extended third corner for the application of petrissage and frictions.

5 In applying the three leg members for petrissage movements, the user must turn the 694 patent onto a flat, prone position and grasp the edges in a twisting motion. This is very awkward on the wrist and hand and requires an effort and dexterity of movement that tires the user quite quickly as well as threatening to over-extend their wrist when applying any force to the movement. As the three leg members are extended from each

10 out point of the device's triangular shape, this results in the only points of contact on the skin being limited to these members, with large areas of non-contact in between. The leg members are rounded with a concave, arched centre. Because these are small, they create too sharp a point and the concave centre creates a suction that could cause discomfort and/or irritation when force is applied too vigorously. The third, extended

15 edge is for deeper petrissage and/or friction movements. The fingers are inserted into the triangular void and the palm rests on the top edge of the triangle, thus creating the weight needed for friction. Whilst the position is theoretically acceptable for friction movements, in practice, it is ineffective. The extended point is again too small and narrow, with two distinct edges that would prove uncomfortable for deep tissue

20 application. In addition, whilst the positioning of the hand is acceptable for rotating movements, it is unsuitable for the sawing motions needed for frictions in that the device described in the 694 patent encourages the wrist to stiffen and over-extend. Although this device may be multi-functional it is extremely complicated, requiring a dextrous and skilled hand for proper application that would probably be beyond the capability and

25 patience of the general public. Finally, the triangular void is for the insertion of the fingers when applying the device to massage movements. The area is small thus encouraging the fingers to be bunched up, resulting in discomfort and limited supply of blood to the fingers that can lead to cramp. The lack of finger space in the 694 patent also means that the pressure to be exerted whilst performing, for instance, friction

30 movement will not be evenly distributed and thus the resulting massage will not be as effective or enjoyable to the recipient.

The present invention is innovative in that this novel device provides an effective and invigorating massage to the recipient while the design provides maximum comfort to the

35 user of the present invention. The present device may be fashioned from any durable material such as plastic, stone, resin, wood or metal. If the device were to be used with



oils or other such lubricating agents then it would be desirable to have the device made from an easily washable material. It is also possible for the device to be made of a material that can be heated, for example, by using hot water or even a microwave and such material should hold the heat for a sufficient period of time (without scalding or burning either the user or the recipient with the heated device during massage), so that the recipient receives the benefit of the use of heat during a massage. Alternatively, it is possible for the upper quadrant of the device (1) to be hollow and a battery-operated heating and/or infrared device to be inserted for heat application during massage.

10 The bottom portion of the device comprises four individual rings (2) to accommodate the four fingers of the user's hand. The fingers are inserted and then close over the ring portions in a gentle, but firm grip, thus making a fist. The bottom most portion of the present massage device is designed to be a gentle concave and to follow essentially the natural concave curve or arch that is formed when making a fist. The concave nature of the bottom-most position of the present device affords the user a more comfortable and "natural" grip when making a fist once the fingers are inserted in the ring portions, as the heel of the hand will fit naturally over the concave arch. As a result, the device becomes virtually part of the fist, the wrist is supported and the main impetus for the force comes from the shoulder. This allows the user to apply strong, even pressure with minimal effort and the user can continue doing so for long periods of time, thus benefiting the recipient.

The "edges" or "corners" of the device are also to be gently rounded to provide both comfort to the user and ensure that no area of the tool will "dig" or "gouge" into the recipient during a vigorous massage (especially one desiring to use petrissage or friction movements). The upper portion consists of a gently-arched dome (1) made of durable material about approximately 1 inch high and as wide as the space it occupies, that being the space between the knuckles and the first finger joints of a closed fist (approximately 2 inches) and spans the entire length of the closed fist. The upper portion is widest in the middle and gently tapers off towards the edges (3) until it is approximately ½ inch on either side of the medial and lateral sides of the hand. The varying widths of the upper part of the device are deliberate and are an essential feature of the present invention. The middle portion of the dome must be wide enough for effleurage and general petrissage whilst the thinner side portions are small enough to carry out focused petrissage and friction movements. The whole of the upper part of the device is gradually and gently arched or domed so that there are no edges (again so

that nothing scrapes or pinches the recipient's skin) and for maximum fluidity of movement with regards to the wrist and the areas being worked. The upper-most part of the device is wide enough to provide a nearly flat and near even surface for the wide, sweeping motions of effective effleurage and lymph drainage, yet the dome is small enough to perform effleurage on arms and legs.

A further advantage is that the rotating motions of petrissage can be performed easily with both the middle and side portions of the upper dome and because the present device has such even and generous spatial range, a maximum coverage can easily be achieved. Due to the device's arched and near circular proportions, the present invention can successfully negotiate difficult areas such as the nape of the neck and the feet with ease and if more concentrated petrissage or friction movements are required, the thinnest part of the device allows concentrated circular and sawing motions or even static pressure with even the most concentrated pressure. Such versatility, in application or ease of use, is not available through other massage tools currently available or described in literature. In addition, its gentle, wide arch results in adequate support being provided to the wrist, through the upper and lower portions of the invention, allowing for the application of the increased pressure needed to achieve deep tissue massage which can be of great benefit to the recipient to relieve chronic muscular tension. One of the benefits of this invention is that regardless of the intensity of the pressure, such pressure will be evenly distributed through the device without exhausting the user and it provides beneficial massage and relaxation to the recipient of such a massage. It is also envisaged that the massage device of the present invention can be used with massage oils, lotions or other such suitable lubricants. The design is completely self-contained, with no moving parts or detachable elements. The dome (1) can be completely solid or, as a design variation and as a further aspect of the device, can be hollow and filled with water or oil of varying colours. Novelty shapes can be inserted to suit aesthetic or seasonal tastes. Likewise, the dome can be hollow and filled with air or inert gas to make the device lighter. The device can be any colour, according to the manufacturing material used. The hollow could alternatively contain a battery operated heating device, although said heating device could also be inserted into the hand grip portion of Figure 2.

In a further aspect of the present invention, the novel device may possess an optional hand grip (5) for extra support to the user. Such a hand grip is an extension of the device that serves to add a firmer grip during massage application. It is made from the

same durable material as the massage device and part of the self-contained device. The extension creates a bar or hand grip that is part of the underside of the finger rings in the same plane and opposite the dome. Alternatively, it is possible for hand grip (5) of the present device to be either of a completely solid nature or it can be made as a hollow and filled with air or inert gas to make the device lighter or to contain a battery operated heating and/or infrared device to be inserted for heat application during massage.

While the present massaging device has been described with various preferred embodiments thereof, it will be understood that this description is intended to illustrate and not to limit the scope of the invention. The optional dimensional relationships for all parts of the invention are to include all variations in size, materials, shape, form, function and operation, which are deemed readily apparent and obvious to those skilled in the art. All equivalent relationships to those illustrated in the figures and described in the specification are intended to be encompassed in this invention what is desired to be protected is defined by the following claims.

## CLAIMS

1. A hand-held massaging device of the type comprising a lower portion which is a grip comprising four rings (2) arranged consecutively and connected to each other,  
5 wherein the second ring is joined to the first and third rings and the third ring is joined to the second and fourth rings, and of a dimension to accommodate the fingers of one hand, wherein the bottom-most portion of the massaging device is of a concaved nature (4) and an upper part comprising a solid, arched dome member (1) connected to the upper surface of all of the rings.  
10
2. The massaging device of claim 1, wherein the upper part is tapered at each end, the widest portion being at the centre of the upper part.
3. The massaging device of claim 1 or claim 2 further comprising a hand grip of a  
15 length similar to the distance between the first and fourth rings, wherein the bottom-most portion of the hand grip is of a concave nature.
4. The massaging device of any one of claims 1 to 3, wherein the upper part is hollow and filled with air or another inert gas.  
20
5. The massaging device of any one of claims 1 to 4, wherein the upper part is hollow and filled with an inert liquid or a battery-operated heating device or an infrared heating device.
- 25 6. The massaging device of claim 3 or claim 4 wherein the hand grip is hollow and filled with an inert liquid or a battery operated heating device or an infrared heating device.

**ABSTRACT**  
**MASSAGING DEVICE**

5 The present invention relates to a hand-held massaging device suitable for use in performing various Swedish massage movements. The device is designed such that a user can self-massage or a user can assist or perform a massage on a person in need of Swedish or Aromatherapy massage treatment. The device can include a hand grip for extra support and comfort by the user.

FIGURE 1

1/3

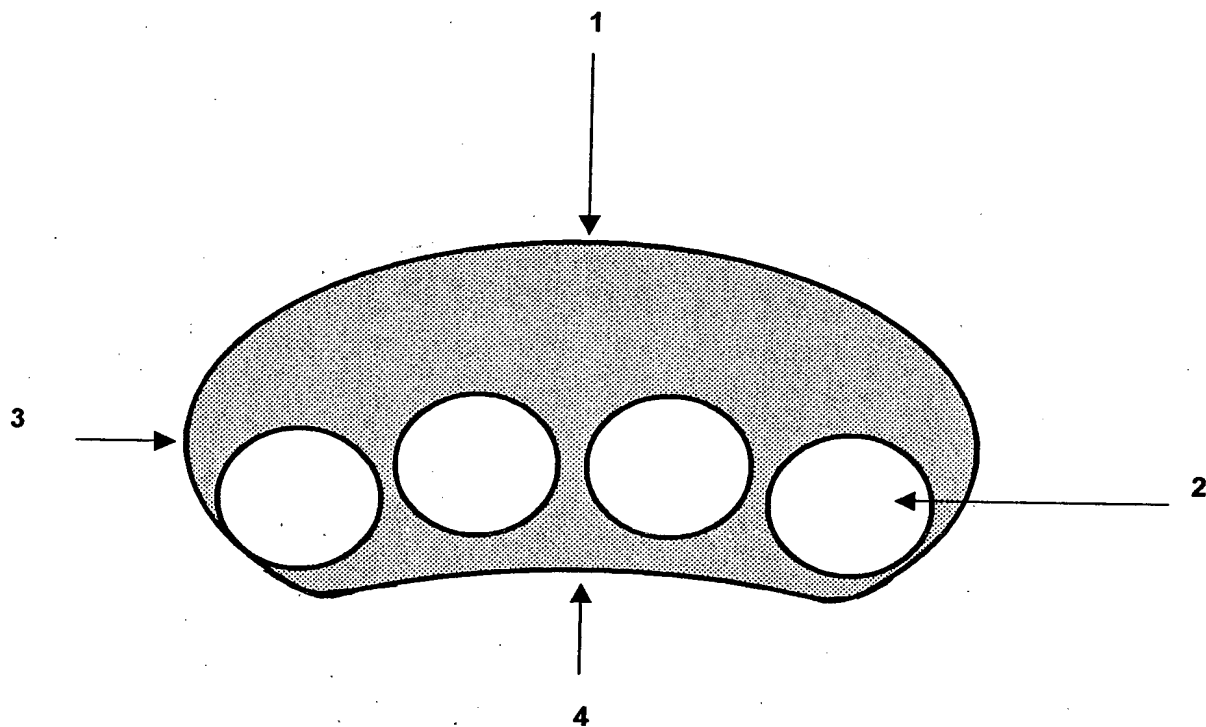
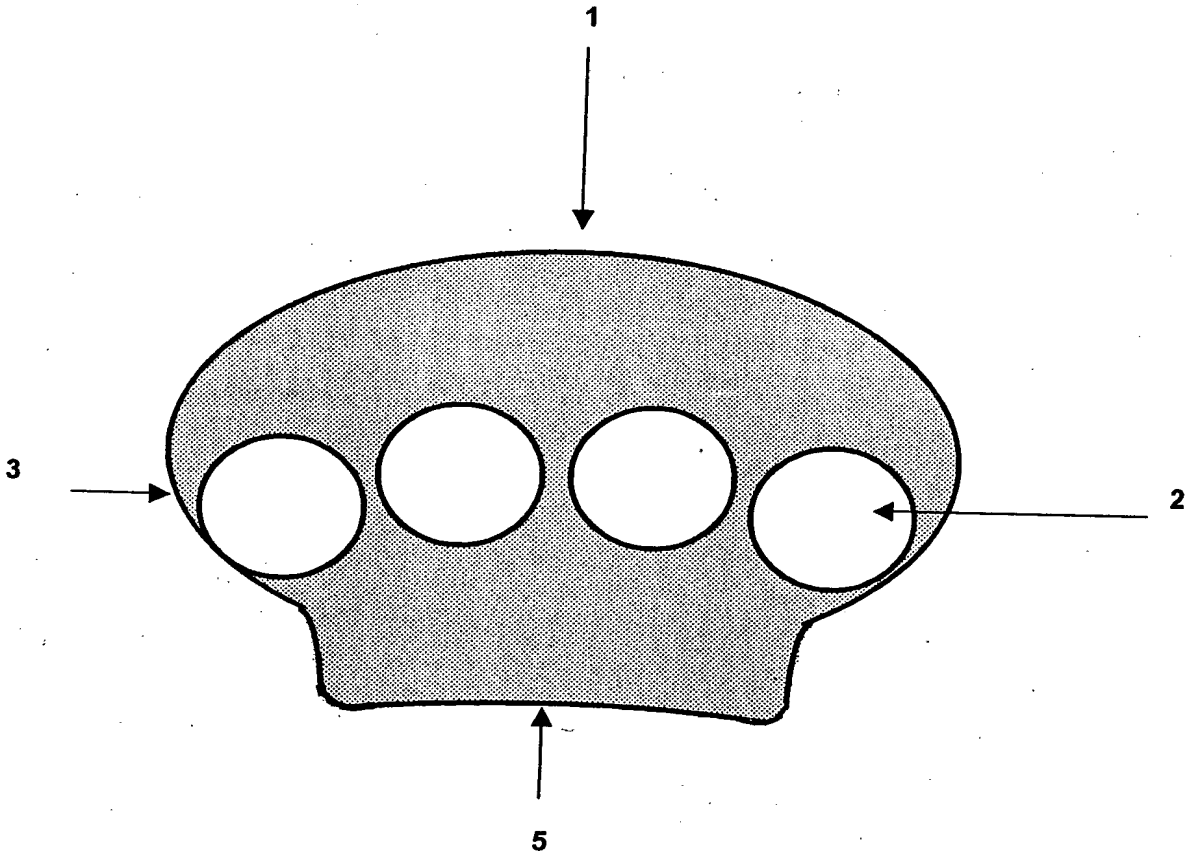
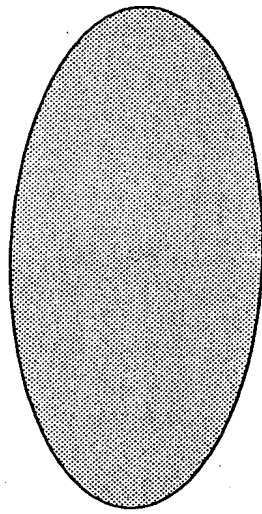


FIGURE 2

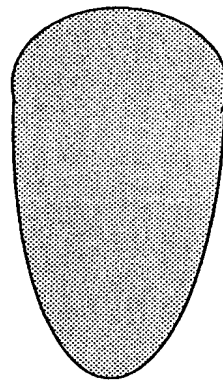


**FIGURE 3**

**3/3**



**Top Overview**



**Side view**